Describe the performance measures that will be used to quantify and verify project performance. Provide a discussion of the monitoring system to be used to verify project performance with respect to the project benefits or objectives identified in the Proposal. Indicate where the data will be collected and the types of analyses to be used. Include a discussion of how monitoring data will be used to measure the performance in meeting the overall goals and objectives of the IRWM Plan.

This attachment presents the planned project monitoring, assessment, and performance measures that will demonstrate that the Proposal will meet its intended goals, achieve measurable outcomes, and provide value to the State of California. The purpose of Attachment 6 is to provide a preview of the information that would go into a monitoring plan.

For Attachment 6, applicants are required to submit Project Performance Measures Tables specific to their Proposal. Project Performance Measures Tables should include the following items:

- *Project goals*
- *Desired outcomes*
- *Output indicators – measures to effectively track output*
- *Outcome indicators – measures to evaluate change that is a direct result of the work*
- *Measurement tools and methods*
- *Targets – measurable targets that are feasible to meet during the life of the Proposal.*

A Project Performance Measures Table should be submitted for each project included in the Proposal. When multiple projects carry the same goals and outcomes, a combined table can be developed to cover those projects. The measurement parameters (metrics) should fit the performance evaluation needs of the Proposal. The metrics may include additional acre-feet of water supply, improved water supply reliability and flexibility, water quality measurements, measurement-based estimates of pollution load reductions, acres of habitat successfully restored, feet of stream channel stabilized, groundwater level measurements, stream flow measurements, improved flood control, or other quantitative measures or indicators.

If the grant application is successful, upon implementation of the proposal, the monitoring tables should be used to develop the proposal monitoring plan.

Introduction

This attachment describes the performance measures that will be used to quantify and verify the performance of each project in this grant proposal. A separate Project Performance Measures table has been prepared for each project or combination of interrelated projects as follows:

Table 1: Ventura County Regional Urban Landscape Efficiency Program (R-1)

Table 2: Calleguas Municipal Water District (Calleguas) Regional Salinity Management Pipeline, Phase 2A (C-14)
Camrosa Water District (Camrosa) Round Mountain Desalter (C-13)
Camarillo Sanitary District (CamSan)/Camrosa Recycled Water Interconnection (C-15)

Table 3: United Water Conservation District (UCWD) Seawater Barrier Pilot Well (SC-9)

Table 4: Ventura County Waterworks District No. 16 (VCWWD No. 16) Piru Treatment Plant Tertiary Upgrade (SC-10)

Table 5: The Nature Conservancy (TNC) – Natural Floodplain Protection Program (SC-7)

Table 6: Ojai Valley Land Conservancy (OVLC) – Ojai Meadows Ecosystem Restoration Final Phase (V-5)

Each table provides a description of: project goals, desired outcomes, output indicators, outcome indicators, measurement tools and methods, and targets for the project or group of projects. This information illustrates how results will be measured, with respect to meeting the

overall goals and objectives of the Watersheds Coalition of Ventura County (WCVC) Integrated Regional Water Management (IRWM) Plan.

Following each table are additional notes on the monitoring system that will be used to verify project performance, and the data management methods and analyses that will be employed. A final section indicates how the monitoring results will correlate with the objectives of WCVC's grant proposal, the WCVC IRWM Plan, and State of California preferences. As described in Attachment 3 – Work Plan, the information provided in Attachment 6 will form the foundation for a Monitoring Plan specific to the project or suite of projects.

Table 1: Ventura County Regional Urban Landscape Efficiency Program (R-1)

Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools & Methods	Targets
Reduce landscape irrigation water use.	▪ Improved landscape irrigation efficiency. ▪ Reduced water demand.	▪ Participating agencies' water demand patterns (normalized for annual differences in weather patterns). ▪ Participating customers' water consumption data.	▪ Volume of irrigation water saved as a result of the project.	▪ Compare participating customers' water billing data before and after program implementation.	▪ Reduce landscape irrigation water use by 20 percent for program participants.
Reduce dependence on imported water and improve water supply reliability.	▪ Reduced demand (or slower growth in demand) for imported water supplies.	▪ Imported water deliveries to Calleguas from Metropolitan Water District of Southern California (Metropolitan). ▪ Imported water deliveries from Calleguas to purveyors.	▪ Volume of imported water use avoided as a result of the project.	▪ Local and imported water production information for participating agencies.	▪ Reduced imported water demand as a proportion of reduced landscape irrigation water use for participating agencies that receive imported water. Estimated at up to 200 acre-feet per year (AFY)/83,900 CCF at full implementation of the program.
Improve water quality.	▪ Reduced runoff from irrigated landscapes.	▪ Reduced irrigation overspray.	▪ Number of irrigation system adjustments/ improvements that reduce irrigation overspray.	▪ Reporting the number of irrigation system adjustments/ improvements that were implemented by each participating agency to reduce irrigation overspray.	▪ Reduced runoff, as inferred from the number of system adjustments/ improvements that were documented.

Table 1: Ventura County Regional Urban Landscape Efficiency Program (R-1) (continued)

Monitoring System: Oxnard will obtain water meter data for each targeted customer, as appropriate, from each of the participating agencies. In addition, the vendor selected to provide both customer audits and irrigation system adjustments/improvements will provide a report to Oxnard summarizing their installations for each customer as well as the aggregate for the program on a periodic basis. As part of the reporting task for this grant, collected data will be compiled and analyzed, and results will be used to assess progress toward project objectives, as described in Attachment 3 – Work Plan. The data will also be presented as part of the IRWM Grant quarterly and/or final report.

Data Management and Analyses: As discussed above, Oxnard will use water meter and water purchase data from each participating agency and will also collect customer audit and irrigation system adjustments/improvements data by customer. Data will be maintained and conveyed in spreadsheets, hard-copy, and/or PDFs. Customer water meter data will be analyzed before and after the audit and adjustments/improvements have been conducted to assess water use reductions. Water meter data and lists of the irrigation adjustments/improvements that were implemented will also be reviewed to evaluate which measures may have been most effective at reducing water use.

Monitoring for IRWM Plan Goals and Objectives: The Data Management and Analyses findings will be compared against the goals and objectives of the WCVC IRWM Plan, as denoted below:

- ☑ **Reduce dependence on imported water**
- ☑ **Protect, conserve, and augment water supplies**
- ☑ **Protect and improve water quality**
- ☐ Protect people, property, and the environment from adverse flooding impacts
- ☑ **Protect and restore habitat and ecosystems in our watersheds**
- ☐ Provide water-related public access, recreational, and educational opportunities

Table 2: Calleguas Regional Salinity Management Pipeline, Phase 2A (C-14)
Camrosa Round Mountain Desalter (C-13)
CamSan/Camrosa – Recycled Water Interconnection (C-15)

Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools & Methods	Targets[1]
Reduce dependence on imported water and improve water supply reliability.	▪ Increased use of underutilized local groundwater and recycled water resources. ▪ Reduced demand (or slower growth in demand) for imported water supplies.	▪ Imported water deliveries to Calleguas from Metropolitan. ▪ Imported water deliveries from Calleguas to purveyors. ▪ Deliveries of local groundwater and recycled water produced by purveyors to customers, including CamSan/Camrosa.	▪ Quantification of the local water resources used in lieu of imported water as a result of the project. ▪ Quantification of imported water use avoided as a result of the project.	▪ Water delivery flow meters at: ▫ East Portal (Calleguas to Metropolitan connection). ▫ Turnouts (Calleguas to purveyors' connections). ▫ Desalters' produced water (purveyor to customers). ▫ Recycled water produced by CamSan.	▪ Production of more than 8,000 AFY of desalted groundwater, including 1,000 AFY from Round Mountain Desalter. ▪ Increase distribution of CamSan recycled water from 1,500 AFY to as much as 7,500 AFY in the future via the Interconnection.
Manage and remove salts in the Watershed and comply with total maximum daily load (TMDL) requirements.	▪ Progress toward compliance with salts TMDLs. ▪ Progress toward delisting of Calleguas Creek and tributaries from impaired waterways list.	▪ Tons of salt exported from the Watershed in desalter concentrate. ▪ Avoided discharge of tons of salt in tertiary effluent.	▪ Progress toward TMDL goals and delisting of impairments.	▪ Flow meters for SMP dischargers, including Round Mountain Desalter and CamSan/Camrosa Recycled Water Interconnection. ▪ Water quality monitoring for concentrate, and tertiary effluent/recycled water.	▪ Export of up to 8,000 tons of salt per year, including 3,000 tons from Round Mountain Desalter and up to 480 tons from the Interconnection.
Support environmental and wetlands restoration by supplying SMP water, if desired by restoring agencies.	▪ Potentially deliver SMP flow to wetlands restoration. ▪ Deliver SMP flow to game preserves and agricultural users in lieu of groundwater use.	▪ Deliveries of SMP flows for non-potable water uses.	▪ Reduced use of groundwater/ potable water for non-potable needs where SMP water is available.	▪ Flow meters for delivery of SMP flows to individual users.	▪ Deliver approximately 500 AFY of SMP flows to non-potable users.

[1] All Targets are cumulative through SMP Phase 2A.

Table 2: Calleguas Regional Salinity Management Pipeline, Phase 2A (C-14)
Camrosa Round Mountain Desalter (C-13)
CamSan/Camrosa – Recycled Water Interconnection (C-15) (continued)

Monitoring System: The participating agencies will, as part of their system operations, collect water/concentrate/recycled water meter data and water purchase data. Camrosa will collect data on influent groundwater salt concentrations and delivered water salt concentrations, and CamSan will collect recycled water salt concentrations as part of their operational monitoring. As part of the reporting task for this grant, collected data will be compiled and analyzed, and results will be used to assess progress toward project objectives, as described in the Attachment 3 – Work Plan for each project. The data will also be presented as part of the IRWM Grant quarterly and/or final report.

Data Management and Analyses: As discussed above, each participating agency will collect relevant water/concentrate/recycled water meter and water purchase data and water quality data for untreated groundwater, treated potable water, and recycled water. Data will be maintained and conveyed in spreadsheets, hard-copy, and/or PDFs. Flow meter data will be analyzed to assess whether actual deliveries and/or discharges met project objectives. Similarly, water quality data with meter data will be analyzed to arrive at a salts removal estimate which will be compared to the targets.

Monitoring for IRWM Plan Goals and Objectives: The Data Management and Analyses findings will be compared against the goals and objectives of the WCVC IRWM Plan for these projects, as denoted below:

- ☑ **Reduce dependence on imported water**
- ☑ **Protect, conserve, and augment water supplies**
- ☑ **Protect and improve water quality**
- ☐ Protect people, property, and the environment from adverse flooding impacts
- ☑ **Protect and restore habitat and ecosystems in our watersheds**
- ☐ Provide water-related public access, recreational, and educational opportunities

Table 3: United Water Conservation District (UWCD) Seawater Barrier Pilot Well (SC-9)

Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools & Methods	Targets
Move groundwater from Oxnard Forebay to southeastern part of Oxnard Plain aquifers to provide seawater intrusion barrier.	▪ Pump groundwater from United's OH System and recharge it into the seawater barrier pilot well.	▪ Quantity of additional water pumped from the OH wellfield.	▪ Quantity of water injected into the seawater barrier pilot well.	▪ Flow meter to record water received and injected on a daily basis.	▪ Inject at least 1,500 AFY into the pilot well.
Provide data to support a future seawater intrusion barrier.	▪ Provide scientific and technical data to support expansion of seawater barrier by injection of potable and/or recycled water treated with reverse osmosis.	▪ Technical information for evaluation of the feasibility of a full scale seawater intrusion barrier.	▪ Completion of a feasibility report on a full scale seawater barrier.	▪ Data will be reviewed by UWCD's Groundwater Department, in conjunction with experts hired by Oxnard. ▪ Feasibility will be reviewed by regulatory agency staff.	▪ Complete a feasibility report and make a recommendation to UWCD Board of Directors and Oxnard City Council.
Provide an emergency water supply for the southern OH System.	▪ Seawater barrier injection well connected to the Ocean View Pipeline, with capability to pump into pipeline.	▪ Ability to pump 500 gallons per minute (gpm) into the Ocean View Pipeline.	▪ Valves and controls installed and pumpback test completed.	▪ Flow meter to measure inflow to the Ocean View pipeline.	▪ Ability to pump 500 gpm into the Ocean View pipeline, after manual switchover to emergency backup mode.

Monitoring System: UWCD, as part of their normal system operations, will collect injected water flow and water quality data and a suite of groundwater level and water quality data. As part of the reporting task for this grant, collected data will be compiled and analyzed, and results will be used to assess progress toward project objectives, as described in the Attachment 3 – Work Plan for the project. The data will also be presented as part of the IRWM Grant quarterly and/or final report.

Data Management and Analyses: As discussed above, UWCD will collect injected water and groundwater flow data and will also collect water quality data for injected water and groundwater. Data will be maintained and conveyed in spreadsheets/databases, GIS, hard-copy, and/or PDFs. Flow meter data will be analyzed to demonstrate whether actual injection met project objectives. Similarly, water quality and groundwater level data will be analyzed to evaluate the impact on the migration of seawater intrusion front, and will be compared to the estimated values and targets to assess progress.

Table 3: United Water Conservation District - Seawater Barrier Pilot Well (SC-9) (continued)

Monitoring for IRWM Plan Goals and Objectives: The Data Management and Analyses findings will be compared against the goals and objectives of the WCVC IRWM Plan, as denoted below:

- ☑ **Reduce dependence on imported water**
- ☑ **Protect, conserve, and augment water supplies**
- ☑ **Protect and improve water quality**
- ☐ Protect people, property, and the environment from adverse flooding impacts
- ☐ Protect and restore habitat and ecosystems in our watersheds
- ☐ Provide water-related public access, recreational, and educational opportunities

Table 4: Ventura County Waterworks District (VCWWD) No. 16 Piru Treatment Plant Tertiary Upgrade (SC-10)

Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools & Methods	Targets
Improve water supply reliability by providing an additional firm source of supply, even during drought conditions.	▪ Provide recycled water for agricultural customers. ▪ Reduce groundwater pumping, especially in dry years, and provide in-lieu conjunctive use.	▪ Complete construction and begin operation of Piru Wastewater Treatment Plant Tertiary Treatment Upgrade. ▪ Delivery of recycled water.	▪ Approximately 500 AFY of recycled water will be available for landscape and irrigation purposes.	▪ Recycled water delivery flow meters at the customers' point of connection.	▪ Number of customers connected to the recycled water system. ▪ Delivery of up to 500 AFY to recycled water customers.
Contribute to attainment of Basin Plan groundwater quality objectives for salts.	▪ Eliminate wastewater discharge to groundwater percolation ponds.	▪ Delivery of recycled water for irrigation rather than to groundwater percolation ponds.	▪ Elimination of discharge to groundwater percolation ponds.	▪ Meter discharge to groundwater percolation ponds. ▪ Recycled water delivery flow meters at the customers' point of connection.	▪ Zero discharge of wastewater to groundwater percolation ponds.

Monitoring System: VCWWD No. 16, as part of their normal system operations, will collect recycled water flow and water quality data as well as groundwater quality data in accordance with Monitoring and Reporting Program No. CI-5714 issued by the Regional Water Quality Control Board – Los Angeles Region. As part of the reporting task for this grant, collected data will be compiled and analyzed, and results will be used to assess progress toward project objectives, as described in the Attachment 3 – Work Plan for the project. The data will also be presented as part of the IRWM Grant quarterly and/or final report.

Data Management and Analyses: As discussed above, VCWWD No. 16 will collect recycled water flow and water quality data and groundwater quality data. Data will be maintained and conveyed in spreadsheets, hard-copy, and/or PDFs. Flow meter data will be analyzed to assess whether actual recycled water deliveries meet project objectives.

Monitoring for IRWM Plan Goals and Objectives: The Data Management and Analyses findings will be compared against the goals and objectives of the WCVC IRWM Plan, as denoted below:

☐ Reduce dependence on imported water

☑ **Protect, conserve, and augment water supplies**

☑ **Protect and improve water quality**

☐ Protect people, property, and the environment from adverse flooding impacts

☐ Protect and restore habitat and ecosystems in our watersheds

☐ Provide water-related public access, recreational, and educational opportunities

Table 5: The Nature Conservancy (TNC) Natural Floodplain Protection Program (SC-7)

Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools & Methods	Targets
Acquire floodplain conservation easement(s) over approximately 225 acres of 500-year floodplain adjacent to the Santa Clara River.	▪ Portion of floodplain to remain undeveloped and exposed to flood inundation.	▪ Land placed under floodplain conservation easement.	▪ Land remains undeveloped and within 500-year floodplain, thereby able to absorb and retain flood waters.	▪ Permanent easement recorded over 500-year floodplain land.	▪ Approximately 225 acres under easement.
Conserve natural habitat associated with 225 acres of 500-year floodplain easements.	▪ Habitat value is retained by remaining undeveloped.	▪ Land placed under floodplain conservation easement.	▪ Land remains undeveloped and within 500-year floodplain, thereby able to provide habitat value.	▪ Permanent easement recorded over 500-year floodplain land.	▪ Approximately 225 acres under easement.
Maintain water quality by reducing scour and providing water treatment buffer.	▪ Water quality degradation is avoided.	▪ Levees not constructed and natural channels maintained that keep flow velocities low. ▪ Development does not occur.	▪ Maintain natural channels that keep flow velocities low. ▪ Maintain water treatment buffer lands.	▪ Levees not constructed on protected lands. ▪ Development not allowed on protected lands.	▪ No levees or development on protected lands.

Monitoring System: To confirm the acreage within the 500-year floodplain, TNC will provide parcel information to Ventura County Watershed Protection District (VCWPD) to overlay on the 500-year floodplain delineation provided by FEMA. This will set the baseline for monitoring acquisition of parcels in the 500-year floodplain. As part of the reporting task for this grant, collected data will be compiled and analyzed, and results will be used to assess progress toward project objectives, as described in the Attachment 3 – Work Plan for the project. The data will also be presented as part of the IRWM Grant quarterly and/or final report.

Data Management and Analyses: As discussed above, TNC will compile and integrate parcel acreages, easements, and VCWPD 500-year floodplain data. Data will be maintained and conveyed in spreadsheets, GIS, hard-copy, and/or PDFs. GIS and easement data will be analyzed to assess actual 500-year floodplain preservation compared to project objectives.

Table 5: The Nature Conservancy Natural Floodplain Protection Program (SC-7) (continued)

Monitoring for IRWM Plan Goals and Objectives: The Data Management and Analyses findings will be compared against the goals and objectives of the WCVC IRWM Plan, as denoted below:

☐ Reduce dependence on imported water

☐ Protect, conserve, and augment water supplies

☑ **Protect and improve water quality**

☑ **Protect people, property, and the environment from adverse flooding impacts**

☑ **Protect and restore habitat and ecosystems in our watersheds**

☐ Provide water-related public access, recreational, and educational opportunities

Table 6: Ojai Valley Land Conservancy (OVLC) Ojai Meadows Ecosystem Restoration Final Phase (V-5)

Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools & Methods	Targets
Establish 9 acres of dense coast live oak woodland habitat. Establish 11 acres of live oak savannah habitat. Establish 20 acres of valley oak savanna habitat. Accomplish additional plantings in existing wetlands channels to enhance stormwater treatment and management.	▪ Diverse, sustainable plant communities. ▪ For dense coast live oak woodland about 75 dense coast live oak woodland trees per acre, and 700 surviving coast live oaks and 945 companion plants. ▪ For live oak savannah, 25 live oak savannah and associated trees per acre and 60 companion plants per acre. ▪ For valley oak savannah, 10 valley oak savannah trees and 10 shrubs per acre. ▪ Reduced erosion into recently restored wetlands.	▪ Total area planted. ▪ Number of plants planted. ▪ Number of different species planted. ▪ Amount and species of native seeds dispersed. ▪ Weeds removed. ▪ Predator types managed.	▪ Native plant coverage. ▪ Non-native plant coverage. ▪ Diversity of species present. ▪ Vertical growth of trees.	▪ Transect surveys to identify: ▫ Total land coverage of native vegetation, non-native vegetation, and bare ground. ▫ Average number of different species occurring within a given area (biodiversity). ▫ Height of the tallest native plant (vertical structure development). ▪ Photographic monitoring (to track annual site development). ▪ Informal bird surveys (to assess functional habitat creation). ▪ Qualitative observations of the cause of plant mortality, relative success of seeds, and indications of natural native plant recruitment.	▪ Cover of invasive weeds less than 10 percent of land cover (less than 15 percent for valley oak savannah). ▪ Native plants more than 75 percent of site vegetation coverage. ▪ In the first 3 years, planted areas will meet applicable criteria for number of established trees and native shrub or understory species diversity as described in the Ojai Meadows Preserve Habitat Restoration and Flood Control Plan found as Exhibit 3-4 to Attachment 3. ▪ Site monitoring data showing a trend of native plant growth and reduction in invasive weeds. If the trend is not indicative of recovery, remedial actions will be initiated. ▪ Increased bird diversity in the planted areas.

Table 6: Ojai Valley Land Conservancy -Ojai Meadows Ecosystem Restoration Final Phase (V-5) (continued)

Monitoring System: Annually, OVLC will collect and maintain information regarding weed removal, planting/seeding (number, size, species, and location), bird/animal counts, and other project related activities, in accordance with the Ojai Meadows Preserve Habitat Restoration and Flood Control Plan found as Exhibit 3-4 to Attachment 3. As part of the reporting task for this grant, collected data will be compiled and analyzed, and results will be used to assess progress toward project objectives, as described in the Attachment 3 – Work Plan for the project. The data will also be presented as part of the IRWM Grant quarterly and/or final report.

Data Management and Analyses: As discussed above, OVLC will compile weed removal, planting/seeding, bird/animal count and other project-related data. Data will be maintained and conveyed in spreadsheets, photographs, hard-copy, and/or PDFs. The data for actual plantings and habitat restoration success will be compared to project objectives.

Monitoring for IRWM Plan Goals and Objectives: The Data Management and Analyses findings will be compared against the goals and objectives of the WCVC IRWM Plan, as denoted below:

☐ Reduce dependence on imported water

☐ Protect, conserve, and augment water supplies

☑ **Protect and improve water quality**

☑ **Protect people, property, and the environment from adverse flooding impacts**

☑ **Protect and restore habitat and ecosystems in our watersheds**

☑ **Provide water-related public access, recreational, and educational opportunities**